

Listing of Claims:

What is claimed is:

1. (Currently Amended). A portable device for reproducing information stored on a compact disc, the device comprising:

- a housing for receiving the compact disc;
- a video interface for acquiring video information from a first channel of the compact disc, the video information having a video frame rate, with video frames formatted at frame start and frame end portions;
- an audio interface for acquiring audio information from a second channel of the compact disc, the video and audio information being recorded as a modulated signal, said audio information having a sampled audio throughput for a single frame of video combined as a number of video pixels per sample in a reduced sample-per-frame number;
- a light emitting diode data acquisition sub-assembly operable with the video interface and audio interface from the modulated signal information where the first and second channels each correspond to one of left and right audio channels associated with the compact disc for reading information from the compact disc;
- an information processor coupled to the video interface, the audio interface, and the light emitting diode data acquisition sub-assembly reproducing the video and audio information from the modulated signal information from the left and right audio channels, the video and audio information being acquired according to the sampled audio throughput with the number of video pixels per sample according to the reduced sample-per-frame number; and
- a display unit in communication with the video interface for displaying video information provided from the information processor;
- wherein the information processor receives a time-synchronized modulated signal from the data acquisition sub-assembly providing an audio signal and a video signal derived into a first channel and a second channel from the compact disc, the video signal

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having one or more frame markers to allow for video reproduction from the modulated signal.

2. (Original). The device of claim 1, wherein the modulated signal is processed by the information processor into respective audio and video signals.

3. (Original). The device of claim 1, wherein the modulated signal comprises interleaved video and audio information.

4. (Original). The device of claim 1, wherein the compact disc is a compact disc digital audio and the modulated signal comprises audio data stored thereon.

5. (Original). The device of claim 1, wherein the light emitting diode data acquisition subassembly rotates the compact disc clockwise.

6. (Original). The device of claim 1, wherein the audio interface comprises an amplifier and a filter.

7. (Original). The device of claim 1, wherein the audio interface is coupled to a speaker in the housing.

8. (Original). The device of claim 1, wherein the display unit is in the housing and operable to display bit map information.

9. (Original). The device of claim 1, wherein the display unit is a liquid crystal display.

10. (Original). The device of claim 1, wherein the compact disc is approximately 85 mm in diameter.

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11. (Original). A method of formatting audio and video information on a compact disc and reproducing the audio and video information using a portable device having an information processor coupled to an audio interface, a video interface, and a light emitting diode data acquisition sub-assembly for reading information from the compact disc, the video information having a video frame rate and the audio information having a sampled audio throughput for a single frame of video, the method comprising:

combining a number of video pixels per sample, thereby generating a reduced sample-per-frame number;

allocating a portion of available samples, determined from a comparison between the sampled audio throughput and the reduced sample-per-frame number, as a frame start portion and a frame end portion;

formatting the frame start portion and the frame end portion;

recording the video information on a first channel and the audio information on a second channel, the video and audio information being recorded as a modulated signal;

acquiring the video and audio information by the light emitting diode data acquisition sub-assembly;

processing the video and audio information in the information processor such that video information is provided to the video interface and audio information is provided to the audio interface; and

reproducing the video and audio information;

wherein the first and second channels are respective left and right audio channels associated with the compact disc, and the video and audio information are time-synchronized.

12. (Original). The method of claim 11, wherein acquiring the video and audio information includes clockwise rotation of the compact disc by the light emitting diode data acquisition sub-assembly.

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13. (Original). The method of claim 11, wherein acquiring the video and audio information includes counterclockwise rotation of the compact disc by the light emitting diode data acquisition sub-assembly.

14. (Original). The method of claim 11, further comprising a security check to determine if the compact disc is of proper size.

15. (Original). The method of claim 11, further comprising a security check to determine if the compact disc is properly formatted.

16. (Original). The method of claim 11, wherein the compact disc is a compact disc digital audio and the modulated signal comprises audio data stored thereon.

17. (Original). The method of claim 11, wherein the compact disc is approximately 85 mm in diameter.

18. (Currently Amended). A system for reproducing audio and video information, the system comprising:

a recorder for associating video and audio information with respective first and second channels formatted for recordation onto a compact disc;

a portable device for reproducing data stored on a compact disc, the device comprising:

a housing for receiving a compact disc;

a video interface for acquiring video information from a first channel of the compact disc, the video information having a video frame rate, with video frames formatted at frame start and frame end portions;

an audio interface for acquiring audio information from a second channel of the compact disc, the video and audio information being recorded as a modulated signal, said audio information having a sampled audio throughput for a single frame of

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video combined as a number of video pixels per sample in a reduced sample-per-frame number;

a light emitting diode data acquisition sub-assembly operable with the video interface and audio interface from the modulated signal information where the first and second channels each correspond to one of left and right audio channels associated with the compact disc for reading information from the compact disc;

an information processor coupled to the video interface, the audio interface, and the light emitting diode data acquisition sub-assembly reproducing the video and audio information from the modulated signal information from the left and right audio channels, the video and audio information being acquired according to the sampled audio throughput with the number of video pixels per sample according to the reduced sample-per-frame number; and

a display unit in communication with the video interface for displaying video information generated by the information processor;

wherein the information processor receives interlaced and time-synchronized audio and video signals from the data acquisition sub-assembly, the audio and video signals being derived from first and second channels on the compact disc, and the video signal having one or more frame markers to allow for video reproduction.

19. (Original). The device of claim 18, wherein the modulated signal is processed by the information processor into respective audio and video signals.

20. The device of claim 18, wherein the modulated signal comprises interleaved video and audio information.

21. (Original). The device of claim 18, wherein the compact disc is a compact disc digital audio and the modulated signal comprises audio data stored thereon.

22. (Original). The device of claim 18, wherein the light emitting diode data acquisition sub-assembly rotates the compact disc clockwise.

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23. (Original). The device of claim 18, wherein the light emitting diode data acquisition sub-assembly rotates the compact disc counterclockwise.
24. (Original). The device of claim 18, wherein the compact disc is approximately 85 mm in diameter.
25. (Original). The device of claim 18, wherein the audio interface comprises an amplifier and a filter.
26. (Original). The device of claim 18, wherein the audio interface is coupled to a speaker in the housing.
27. (Original). The device of claim 18, wherein the display unit is in the housing and operable to display bit map information.
28. (Original). The device of claim 18, wherein the display unit is a liquid crystal display.
29. (Currently Amended). A system for reproducing audio and video information, the system comprising:
 - a recorder for associating video and audio information with respective first and second channels formatted for recordation onto a compact disc;
 - a portable device operable to receive the compact disc and including:
 - a housing for receiving a compact disc and having:
 - an upper portion;
 - a lid coupled to the upper portion;
 - a lower portion;
 - wherein the lid is coupled to the upper portion at a pivot point such that the lid pivots between an open position and a closed position;

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a video interface for acquiring video information from a first channel of the compact disc, the video information having a video frame rate, with video frames formatted at frame start and frame end portions;

an audio interface for acquiring audio information from a second channel of the compact disc, the video and audio information being recorded as a modulated signal, said audio information having a sampled audio throughput for a single frame of video combined as a number of video pixels per sample in a reduced sample-per-frame number;

a light emitting diode data acquisition sub-assembly operable with the video interface and audio interface from the modulated signal information where the first and second channels each correspond to one of left and right audio channels associated with the compact disc for reading information from the compact disc;

an information processor coupled to the video interface, the audio interface, and the light emitting diode data acquisition sub-assembly reproducing the video and audio information from the modulated signal information from the left and right audio channels, the video and audio information being acquired according to the sampled audio throughput with the number of video pixels per sample according to the reduced sample-per-frame number; and

a display unit in communication with the video interface for displaying video information provided from the information processor;

wherein the information processor receives interlaced and time-synchronized audio and video signals from the data acquisition sub-assembly, the audio and video signals being derived from first and second channels on the compact disc, and the video signal having one or more frame markers to allow for video reproduction.

30. (Original). The system of claim 29, wherein the lid pivots about an axis that is parallel to an axis of compact disc rotation.

31. (Original). The system of claim 29, wherein the lid pivots about an axis that is perpendicular to an axis of compact disc rotation.

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32. (Original). The system of claim 29, wherein the compact disc is approximately 85 mm in diameter.

33. (Original). The system of claim 29, wherein the display unit is a liquid crystal display.